

REMARKS

This is a Response to the Office Action mailed September 3, 2009, in which a three (3) month Shortened Statutory Period for Response has been set, due to expire December 3, 2009. Twenty-nine (29) claims, including four (4) independent claims, were paid for in the application. No claims have been canceled or added. No claims have been amended. No new matter has been added to the application. No fee for additional claims is due by way of this Response. The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090. Claims 40-42, 44-46, 50, 51, 59 and 62-71 are pending.

In the interest of advancing the prosecution, Applicants address the "Response to Arguments" set out in the Office Action mailed September 3, 2009. However, Applicants expressly continue to rely on all arguments that Applicants have previously presented.

Rejections Under 35 U.S.C. § 103

Claims 40, 44-46, 50, 51, 62, 65, and 68-70 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,026,818 issued to Blair et al. (hereinafter "Blair") in view of U.S. Patent No. 6,909,366 issued to Marsh et al. (hereinafter "Marsh").

1. Applicants previously argued that it would not have been obvious to modify the teachings of Blair with those of Marsh since Blair employs transponders which each include mutually orthogonal antennas. Amendment mailed June 22, 2009, page.

In response, the current Office Action states that it would have been obvious to modify Blair to include an "interrogator which transmits a varying interrogation signal in a round robin scheme as taught by Marsh in order to cover all possible orientations and locations of the tagged objects with the area to be interrogated." Office Action mailed September 3, 2009, page 10.

Respectfully, such a statement unfortunately does not appear to actually address Applicants' argument. The question may be better understood as: Why would one of ordinary skill in the art even be concerned with fixing a problem (*i.e.*, orientation and location) that does

not exist? As previously explained, Blair employs transponders with mutually orthogonal antenna coils. Thus, there is no orientation or location problem when using the transponders of Blair. Hence, there is no reason or motivation for modifying the teachings of Blair to incorporate the antenna of Marsh.¹ But for the Applicants' own teachings, there appears no reason to modify Blair with the teachings of Marsh.

Further with respect to this argument, the Office does not explain why one of skill in the art would ignore the specific teachings of Blair, which are directed to detecting resonant transponders, in order to rely on the teachings of Marsh, which are directed to reading and writing information from and to memories of RFID transponders.² The Office is respectfully requested to provide a rationale in the record for why one of skill in the art would rely on the teachings of Marsh to modify Blair, while ignoring the specific solution already provided by Blair.

2. Applicants previously argued that the proposed modification would render the reference inoperative or unsatisfactory for its intended use. Amendment mailed June 22, 2009, pages 10-11.

The Office contends that "modifying Blair by including the teachings of Marsh would not render the prior art invention being modified unsatisfactory for its intended purpose" purportedly because "the detection wand with multiple antenna elements will still be able to be used for detection of the presence of objects and particularly suitable for use in detection of objects such as surgical sponges which may have been left behind during surgery." Office Action mailed September 3, 2009, page 11.

Respectfully, such statement unfortunately does not actually address the Applicant's explanation as of the fundamental technical differences between Blair and Marsh. Blair advantageously employs "quiet" listening periods to detect response signals from

¹ MPEP 2143.01 I Obviousness can be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so. *In re Kahn*, 441 F.3d 977, 986, 78 USPQ2d 1329, 1335 (Fed. Cir. 2006).

² MPEP 2143.01 II Where the teachings of two or more prior art references conflict, the examiner must weigh the power of each reference to suggest solutions to one of ordinary skill in the art, considering the degree to which one reference might accurately discredit another. Citing *In re Young*, 917 F.2d 588 (Fed. Cir. 1991).

transponders, during which no interrogation signals are transmitted. In contrast, the round robin interrogation taught by Marsh not only appears to omit such “quiet” listening periods, but actively teaches away from such. Amendment mailed June 22, 2009, page 10. Thus, even if there was motivation or a reason for modifying Blair according to the teachings of Marsh, such modification would result in a device that did not employ quiet periods, and thus would render Blair unsatisfactory for its intended purpose (*i.e.*, detecting low Q transponders using wideband signals at ranges suitable for use in surgeries). The fundamental technical differences in operation between the two references has yet to be addressed, or even acknowledged by the Office. The Office is respectfully requested to provide an explanation of such in the record.

3. Applicants previously argued that there is little likelihood of success or no predictable results in modifying Blair according to the teachings of Marsh.³

The Office Action states that “Marsh is used to indicate that using three mutually orthogonal transmit/receive antenna elements are well known in the art to cover a larger interrogation area, so using the three mutually orthogonal rings on the handheld interrogator of Blair would yield a same predictable result.” Office Action mailed September 3, 2009, page 10.

Respectfully, such does not however address Applicant’s technological based arguments. As explained in Applicant’s previous response, Marsh employs a fixed antenna, which assures successfully power RFID transponders and which makes the clocking of signals easy. Results are not predictable when changing from a fixed antenna to a handheld antenna that is randomly moveable in space over time. Some examples of the unpredictability have been provided in the previous response.

Additionally, the purpose of using a round robin approach would be completely undermined where the antennas are not fixed. Marsh employs a round robin approach using fixed antenna to ensure that a randomly oriented transponder receives sufficient power over a period of time. However, if the antennas are handheld, there is no assurance of an fixed orientation between any given one of the antennas and the transponder for any length of time.

³ The mere fact that references can be combined or modified does not render the resultant combination obvious unless **>the results would have been predictable to one of ordinary skill in the art. *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 USPQ2d 1385, 1396 (2007) (“If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability.

Thus, a round robin approach might actually cause a randomly oriented transponder to not receive sufficient energy over a given period of time, due to movement of the handheld antenna. This would be particularly exacerbated where one of the references teaches moving the handheld antenna to scan a patient's body or portion thereof. In such a situation, the orientation of the handheld antenna with respect to the transponder will be continually changing. Such is a real world concern that would have to be addressed by one of ordinary skill in the art before attempting to combine the teaching of the two references. The Office is respectfully requested to clearly address such in the written record.

4. Applicants previously argued that the modification would change a principal of operation of the reference. Amendment filed June 22, 2009, page 13.

The Office does specifically address this point of argument, but appears to possibly conflate this argument with the Applicant's argument that the proposed modification would render the reference inoperative or unsatisfactory. However, such is a separate ground for showing that the teachings of two references are *not sufficient* to render claims *prima facie* obvious. MPEP 2143 VI, reciting *In re Ratti*, 270 F.2s 810 (emphasis added). As Applicants have previously explained, Blair advantageously employs "quiet" listening periods during which no interrogation signals are transmitted, and during which response signals from transponders are detected. Blair teaches that such improves signal-to-noise ratio, and hence range. In contrast, Marsh teaches a round robin interrogation which omits such "quiet" listening periods in lieu of keeping the transponder powered. This fundamental difference in technical operation has notably not yet been addressed by the Office. The Office is respectfully requested to address such fundamental difference in technical operation in the written record.

Claims 41 and 66 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Blair in view of Marsh and further in view of U.S. Patent No. 6,349,234 issued to Pauly et al. (hereinafter "Pauly").

Applicants previously argued that Pauly is directed to optical communications.

The Office Action concludes that "Pauly is used to indicate that using pulse width modulation in a communication system is well known in the art to convey information in a

communications channel” and summarily concludes “so using pulse width modulation in the system of Blair would yield a same predictable results of conveying information between an interrogator and a tag.” Office Action mailed September 3, 2009, page 11-12. The Office Action also summarily concludes that “pulse width modulation can be used in a same manner in RF as used in optical.” Id.

The Office Action does not provide any support for its conclusion that “pulse width modulation can be used in a same manner in RF as used in optical.” Nor is there an explanation of why one of ordinary skill in the art would look to a reference directed to *optical* communications when addressing a problem in *radio* communications.

As previously argued, Pauly *actively teaches away* from the use of radio communications, teaching the benefit of optical communications. Such a teaching emphasizes that a difference between the two forms of communication (RF and optical) is recognized in the art and such forms of communication are not simply substituted for each other. Such would also deter one of ordinary skill in the art from employing RF communications. No reasons have been given for ignoring the clear teaching of Pauly to use optical communications in lieu of radio.

If the clear teaching of Pauly is followed, the Blair device be modified to employ optical communications, hence changing its principal of operation. Again, the Office Action provides no reason for picking certain teachings of Pauly (*i.e.*, pulse width modulation, frequency key shifting) while ignoring other teachings (*i.e.*, optical communications). The Office is respectfully requested to provide a rationale in the record for selecting certain portions of Pauly while ignoring other portions.

Claims 42 and 67 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Blair in view of Marsh and further in view of U.S. Patent No. 4,893,118 issued to Lewiner et al. (hereinafter “Lewiner”).

The Office Action states that “Lewiner is used to indicate that using voltage modulation in a communications system is well known in the art to convey information in a communications channel so using voltage modulation in the system of Blair would yield the same predictable results of conveying information between an interrogator and tag.” Office Action mailed September 3, 2009, page 12.

Applicants' prior responses explained why such results would *not be predictable*, noting the differences between near field and far field communications. Amendment filed June 22, 2009, page 16. The current Office Action fails to address the technical distinctions between near field and far field communications argued in Applicant's previous responses.

Again, the Office is selecting only certain portions of the reference (see prior response), while ignoring other portions *without providing a basis or explanation* for such selective use of the reference. The only discernable basis appears to be Applicant's own teachings in the present application. While the Office alleges that using a voltage varying wideband interrogation signal would not change the principal of operation of Blair, such requires ignoring the specific teachings of Lewiner which if applied to Blair would result in 1) a near field reader; and 2) simultaneous transmission and reception. So the Office must ignore clear teachings of Lewiner to arrive at the purported combination. The Office is respectfully requested to provide a rationale in the record for selecting certain portions of Lewiner while ignoring other portions.

Claims 63, 64, and 71 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Blair in view of Marsh and further in view of U.S. Patent No. 6,633,226 issued to Nysen.

Applicants previously argued, *inter alia*, that Nysen is directed to acoustics, and employs a fundamentally different principal of operation than radio communications. Amendment filed June 22, 2009, page 19. The Office has provided no explanation of how such an unrelated reference could possibly be relied upon. Nor has the Office explained why the principal teaching of Nysen (acoustics) should be ignored. Without selective reliance, the proposed combination would employ acoustics instead of RF communications. Again, the Office is respectfully requested to provide a rationale in the record for selecting certain portions of Nysen while ignoring other portions.

Conclusion

Applicants respectfully submit that the pending claims are in condition for allowance. Any remarks in support of patentability of one claim should not be imputed to any

other claim, even if similar terminology is used. Any remarks referring to only a portion of a claim should not be understood to base patentability on that portion; rather, patentability must rest on each claim taken as a whole. A number of clarifying amendments have also been made to the above claim set. Applicants do not acquiesce to each of the Examiner's rejections and to each of the Examiner's assertions regarding what the cited references show or teach, even if not expressly discussed herein. Although changes to the claims have been made, no acquiescence or estoppel is or should be implied thereby; such amendments are made only to expedite prosecution of the present application and are without prejudice to the presentation or assertion, in the future, of claims relating to the same or similar subject matter.

If the undersigned attorney has overlooked a relevant teaching in any of the references, the Examiner is requested to point out specifically where such teaching may be found. In light of the above amendments and remarks, Applicants respectfully submit that all pending claims are allowable. Applicants, therefore, respectfully request that the Examiner reconsider this application and timely allow all pending claims. The Examiner is encouraged to contact the undersigned by telephone to discuss the above and any other distinctions between the claims and the applied references, if desired. If the Examiner notes any informalities in the claims, the Examiner is encouraged to contact the undersigned by telephone to expediently correct such informalities.

Respectfully submitted,
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